

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 5-10, 12 and 21 are pending, with claims 1 and 8 amended by the present Amendment. Claims 1 and 8 are independent.

In the Official Action, claims 1-2, 6-7 and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Wunderlin (U.S. Patent No. 6,845,290); claims 8-9, 11 and 13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kim (U.S. Patent No. 5,347,727); claim 5 was rejected under 35 U.S.C. § 103(a) as being obvious in view of Wunderlin; claims 10 and 12 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Kim and Chernetski (U.S. Patent Pub. No. 2004/0066303); and claims 1-2, 5-10, 12 and 21 were rejected on the grounds of non-statutory obviousness-type double patenting in view of claims 1-15 of U.S. Patent No. 6,931,759.

Claims 1 and 8 are amended to more clearly describe and distinctly claim Applicant's invention. Support for this amendment is found in Applicant's originally filed specification. No new matter is added.

Finally, Applicant traverses the double patenting rejection and notes that the claims of U.S. Patent No. 6,931,759 do not recite features related to "determining a total number of the objects *by comparing a lowest humidity value detected for a predetermined time with a predetermined humidity value.*"

Turning now to the rejections in view of the applied art, amended claim 1 is directed to

A condenser type dryer, comprising:

a key input unit configured to enable a user to select a drying course and a degree of dryness;

a humidity detecting unit configured to detect a humidity of objects, which are loaded in a drum to be dried, during a drying cycle; and

a control unit configured to determine a total number of the objects ***by comparing a lowest humidity value detected for a predetermined time with a predetermined humidity value*** and to control a duration of the drying cycle based on the selected drying course, the selected degree of the dryness and the determined total number.

Amended claim 8 recites, *inter alia*, determining a total number of the objects ***by comparing a lowest humidity value detected for a predetermined time with a predetermined humidity value***.

Wunderlin describes a dryer using microprocessor-based control for automatically shutting off the dryer. The dryer of Wunderlin receives a signal indicative of moisture content of the clothing articles; stores historical stop time data of respective dry cycles; and estimates the stop time of the dry cycle as the cycle is being executed. As the clothes are tumbled in dryer drum 26 they randomly contact the spaced-apart electrodes of stationary moisture sensor 52. Hence, the clothes are intermittently in contact with the sensor electrodes. The duration of contact between the clothes and the sensor electrodes is dependent upon several factors, such as drum rotational speed, the type of clothes, and the amount or volume of clothes in the drum. When wet clothes are in the dryer drum and in contact with the sensor electrodes, the resistance across the sensor is low. Conversely, when the clothes are dry and contacting the sensor electrodes, the resistance across the sensor is high and indicative of a dry load. However, there may be situations that could result in erroneous indications of the actual level of dryness of the

articles. In Wunderlin, the voltage signal from the moisture sensor may be highly variable over time. As suggested above, the articles may from time to time contact the electrodes of the moisture sensor and sometimes would not come in contact at all with the electrodes of the moisture sensor due to the generally random tumbling pattern of the clothes. Other factors, such as the type of fabric of the load, load weight, etc., would also affect how fast or slow the level of the voltage signal changes as a function of time.

However, contrary to the Official Action, the controller of Wunderlin does not determine the total number of the objects in the dryer by any means, let alone *by comparing a lowest humidity value detected for a predetermined time with a predetermined humidity value*. The cited passage of Wunderlin, as well as the remainder of Wunderlin, makes no mention of determining the total number of the objects in the dryer.

Kim describes a method for determining a fabric quantity of clothes being dried in a drum of a dryer having a heat exchanging fan, a motor for driving the drum, a heater and a microcomputer for controlling the drying operation, comprising the steps of: turning on the heater and the motor at the beginning of the drying operation; checking whether a predetermined time has lapsed since the beginning of the drying operation; obtaining a temperature variation per unit time and a humidity value of the air exhausted out of the drum by the heat exchanging fan, when the predetermined time is checked to have lapsed; calculating an arithmetical mean of the temperature variation per unit time and the humidity value; comparing the calculated arithmetical mean with a plurality of reference values experimentally predetermined; and determining the fabric quantity of clothes being dried in the drum in accordance with the comparison.

However, Kim does not determine the total number of the objects in the dryer by any means, let alone *by comparing a lowest humidity value detected for a predetermined time with a predetermined humidity value*. The cited passage of Wunderlin, as well as the remainder of Wunderlin, makes no mention of determining the total number of the objects in the dryer.

MPEP § 2131 notes that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also MPEP § 2131.02. “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because Wunderlin and Kim each do not disclose or suggest all of the features recited in claims 1 and 8, Wunderlin and Kim each do not anticipate the invention recited in claims 1 and 8, and all claims depending therefrom.

Chernetski describes an apparatus for determining an approximate mass of a fabric load in an automatic clothes dryer. However, Chernetski does not cure the deficiencies of Wunderlin and Kim. As none of the cited art, individually or in combination, discloses or suggests at least the above-noted features of independent claims 1 and 8, Applicant submits the inventions defined by claims 1 and 8, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.¹

¹ MPEP § 2142 “...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael E. Monaco, Reg. No. 52,041, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By 

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